

(No Model.)

A. B. SMITH.
PLUMB BOB ADJUSTING DEVICE.

No. 564,316.

Patented July 21, 1896.

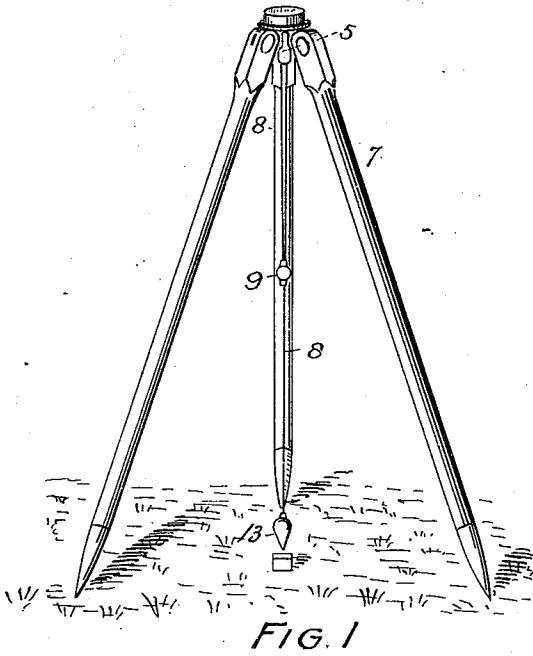


FIG. 1

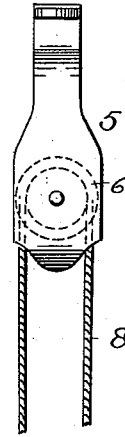


FIG. 2

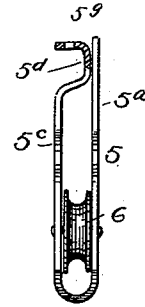


FIG. 3

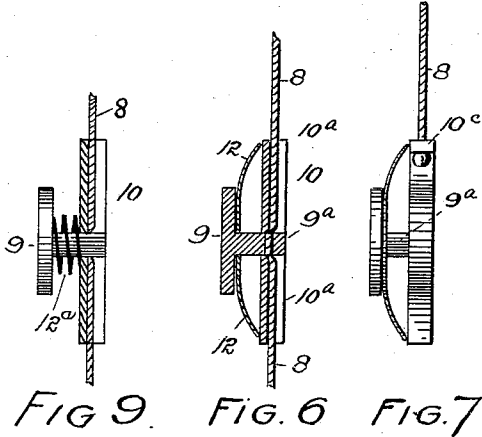


FIG. 4

FIG. 5

FIG. 6

FIG. 7

FIG. 8

FIG. 9

WITNESSES:

J. J. Delaney
Chas. Dawson

INVENTOR

A. B. Smith

BY

Wm. B. Smith

ATTORNEY

UNITED STATES PATENT OFFICE.

ANSELMO B. SMITH, OF DENVER, COLORADO.

PLUMB-BOB-ADJUSTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 564,316, dated July 21, 1896.

Application filed June 22, 1895. Serial No. 553,756. (No model.)

To all whom it may concern:

Be it known that I, ANSELMO B. SMITH, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Plumb-Bob-Adjusting Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in plumb-bob attachments specially designed for use by surveyors and others who use a plumb-bob in connection with the tripod. By means of my attachment the plumb-bob is readily adjustable.

The invention consists of the features hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 illustrates the invention attached to a tripod. Fig. 2 is a front view in detail of the pulley-holder, which is attached to the tripod when the device is in use. In this view the cord is shown engaging the pulley. Fig. 3 is a side elevation of the pulley-holder. Fig. 4 shows the adjusting-clasp with the cord applied. Fig. 5 illustrates the clasp in detail, the opposite face being shown. Fig. 6 is a section taken through the clasp on the line 6-6, Fig. 4. Fig. 7 is a side elevation of the clasp. Fig. 8 illustrates the clasp, partly in section, taken on the line 8-8, Fig. 4. Fig. 9 is a section illustrating a modified form of clasp.

In the views from Figs. 2 to 8, inclusive, the parts are shown on a large scale for convenience of illustration.

Similar reference-characters indicating corresponding parts in these views, let the numeral 5 designate the holder, comprising two spring-arms, between which is located the pulley 6. The portion of the arm 5^a which projects above the pulley is straight, while the corresponding portion of arm 5^c is provided with a bend 5^d, which engages the arm 5^a. The upper extremity of the arm 5^c is formed

into a flange 5^e. This flange, which is apertured, forms the means, in connection with any suitable fastening device, as a small screw, for attaching the holder to the tripod 7. The bend 5^d closes the holder at the top. In attaching and detaching the cord 8 the latter is slipped between this bend and the arm 5^a of the holder.

The adjusting-clasp comprises a press-button 9 and a base 10. This button is provided with a shank 9^a, which engages a central aperture formed in the base 10. This base is provided with a groove 10^a in line with, or adapted to intersect, the aperture which the shank of the button engages. The shank 9^a is provided with an aperture adapted to register with the groove 10^a when the button is pressed. This aperture is normally held out of line with the groove 10^a by a bow-shaped spring 12, attached to the button and having lateral projections, which engage the base 10. The base is provided with an apertured lug 10^c, to which one extremity of the cord 8 is attached. The shank 9^a of the button is flat on one side, while the aperture which it engages is of corresponding shape. This construction prevents the button from turning.

One extremity of the device being attached to the lug 10^c of the base, the other extremity is threaded through the shank of the button, which is pressed to cause the aperture to register with the groove 10^a. The cord being in engagement with the groove is then drawn through the shank a suitable distance, after which the plumb-bob 13 is attached to the lower extremity. By this arrangement it will be observed that a loop is formed in the cord 8 above the adjusting-clasp. This loop is then slipped into the holder 5 to engagement with the pulley 6 in the manner heretofore explained, and the device is ready for use.

It will be observed that when the button 9 is released from pressure the cord is locked in the adjusting-clasp, since the action of the spring forms a bend in the cord and will not allow the latter to slip through the clasp until it is released by pressing the button, when the gravity of the plumb-bob will draw the cord through the clasp as desired. The plumb-bob is easily raised by pressing on the button and pulling upward on the cord.

In the modified form of construction shown in Fig. 9 a coil-spring 12^a is employed. This spring surrounds the shank of the button 9, and one of its extremities bears against the
 5 base of the clasp, while the other extremity engages the head of the button. This spring 12^a subserves the same function as the bow-shaped spring 12 shown in the other figures.

Having thus described my invention, what
 10 I claim is—

1. The combination with the tripod, or other suitable supporting means, of the pulley-holder attached thereto, the pulley supported by said holder; the clasp comprising
 15 a base 10 having an open groove and an aperture formed at right angles to the groove and in line therewith, the button comprising the head and the shank, the latter being adapted to enter the aperture in the base,
 20 the shank being apertured as described, the spring located between the base and the head of the button; the cord of the plumb-bob attached to the base of the clasp, engaging the pulley in the holder and the groove in the
 25 base of the clasp, said cord being threaded through the aperture in the shank of the button, said aperture being normally held by the spring out of line with the groove in the base, as and for the purpose set forth.
- 30 2. The combination with the tripod, of the pulley-holder attached thereto, the pulley supported by said holder, the clasp comprising the base 10 having an open groove and an aperture formed at right angles to the
 35 groove and in line therewith, the button comprising the head and the shank, the latter being adapted to enter the aperture in the base, the shank being apertured as described, the bow-shaped spring located between the
 40 base and the head of the button and having

lateral projections engaging the base on opposite sides of the head; the cord of the plumb-bob attached to the base of the clasp engaging the pulley in the holder and the
 45 groove in the base of the clasp, said cord being threaded through the aperture in the shank of the button, said aperture being normally held by the spring out of line with the groove in the base, substantially as described.

3. The combination with the tripod, of the pulley-holder attached thereto and having two spring-arms, one of which is provided with a bend engaging the other, the pulley supported by said holder; the clasp comprising
 55 a base 10 having an open groove and an aperture formed at right angles to the base and in line therewith, the button comprising the head and the shank, the latter being adapted to enter the aperture in the
 60 base, the shank being apertured as described, and the bow-shaped spring located between the base and the head of the button and having lateral projections engaging the base on
 65 opposite sides of the head; the cord of the plumb-bob attached to the base of the clasp engaging the pulley in the holder and the groove in the base of the clasp, said cord
 70 being threaded through the aperture in the shank of the button, said aperture being normally held by the spring out of line with the groove in the base, as and for the purpose set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

ANSELMO B. SMITH.

Witnesses:

ROBT. G. AINSWORTH,
 CHAS. E. DAWSON.